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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/632,180	08/03/2000	Vadim Lubomirsky	C34932/111613	9765
27572	7590	07/10/2006	EXAMINER	
HARNESS, DICKEY & PIERCE, P.L.C.			BURD, KEVIN MICHAEL	
P.O. BOX 828			ART UNIT	
BLOOMFIELD HILLS, MI 48303			PAPER NUMBER	
			2611	

DATE MAILED: 07/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/632,180

Applicant(s)

LUBOMIRSKY, VADIM

Examiner

Kevin M. Burd

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-79 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 15 and 64-79 is/are allowed.
- 6) ☒ Claim(s) 1-14, 16-63 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

1. This office action, in response to the request for continued examination filed 6/5/2006, is a final office action.

Response to Arguments

2. Applicant's arguments filed 6/5/2006 have been fully considered but they are not persuasive.
3. Regarding the rejections of claim 1-14 and 16-63 under 35 U.S.C. 103(a) as being unpatentable over Harris et al (US 6,333,654) in view in view of McDaniel et al (US 6,232,604) further in view of Ng et al (US 6,011,679):

Applicant argues the references do not teach a time-length signal that indicates a pulse width. However, Harris discloses a time length signal 82. This signal is digital and contains pulses. These signals will have a corresponding width and therefore the time-length signal indicates the pulse width.

Applicant argues the McDaniel reference is not analogous art. However, McDaniel discloses a method of providing coarse and fine delay to suitably delay a received signal.

4. Regarding the rejections of claims 1-14 and 26-63 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-23 of U.S. Patent No. 6,804,788 in view of Ng et al (US 6,011,679):

Applicant argues the references do not teach a time-length signal that indicates a pulse width. However, Lubomirsky discloses a time length signal. This signal is digital

and contains pulses. These signals will have a corresponding width and therefore the time-length signal indicates the pulse width.

Applicant states the examiner has not shown any motivation to combine the references. The examiner disagrees. The motivation was provided in the previous office action on page 5.

The rejections stated in the previous office action are maintained and restated below. The previous rejections of claims 15 and 64-79 are withdrawn.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-14 and 16-63 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harris et al (US 6,333,654) in view of McDaniel et al (US 6,232,604) further in view of Ng et al (US 6,011,679).

Regarding claims 1, 12-14, 16, 24-31, 37-40, 45-48, 51-56 and 61-63, Harris discloses a controlling circuit for a power supply (abstract and figures 4 and 5). Harris generates a time length signal 82 in figure 5. This signal is digital and contains pulses. These signals will have a corresponding width and therefore the time-length signal indicates the pulse width. The signal comprises a first portion and a second portion. The first portion is input to a coarse variable delay 56 (counting means) that comprises a

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counter (column 7, lines 58-60). The counter counts down from a predetermined number to zero (column 7, lines 60-64) and outputs a signal to a fine variable delay 58. The fine variable delay will determine an appropriate delay and output a corresponding output signal. This output signal will be input to the supply voltage selector 44 and 45. The fine variable delay 58 calculates the delay value. No selection takes place. McDaniel discloses a fine delay module and a look up table coupled to the fine delay module in figure 6. The LUT 192 receives a signal and selects an appropriate delay. The fine delay circuit then delays the course delayed signal according to the input from the LUT and outputs a delayed signal (column 9, lines 22-37). It would have been obvious for one of ordinary skill in the art at the time of the invention to incorporate the fine delay circuitry of McDaniel into the controlling circuit of Harris. The look up table and fine delay circuit allow the calculations for determining the fine delay to be done in advance and will decrease the time necessary during operation. The combination of Harris and McDaniel does not disclose the pulse width modulation controlling circuit is used for a power supply. However, Ng discloses it is well known in the art of power supply circuitry to use a pulse width modulator to generate a power supply output voltage. The PWM circuit allows the output voltage to be easily changed when necessary (column 5, lines 15-31). It would have been obvious for one of ordinary skill in the art at the time of the invention to use the power supply controlling circuit of Harris and McDaniel to output the PWM power supply voltage as shown by Ng for the reason stated above.

Regarding claims 2, 3, 17, 18, 19, 32, 33, 49 and 50, the counting means is digital and a programmable logic device (column 7, lines 58-62).

Regarding claims 4, 5, 20, 34 and 35, the components will be clocked at a set frequency. The clocking frequency is a design choice.

Regarding claims 6 and 36, the amount of delay is a design choice to determine an appropriate slew delay.

Regarding claims 7-9, 21-23, 41-44 and 57-60, the delay means discussed above are digital. However, it would have been obvious for one of ordinary skill in the art at the time of the invention to use analog delays instead of digital delays. The cost for analog delays is small and would reduce the price of the overall circuitry.

Regarding claims 10 and 11, a delay value is selected in the fine variable delay and a voltage is selected in the supply voltage selector.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

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6. Claims 1-14 and 16-63 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-23 of U.S. Patent No. 6,804,788 in view of Ng et al (US 6,011,679).

Regarding claims 1, 15-17, 31, 41, 48, 49 and 57, Lubomirsky discloses the claimed invention but does not disclose the pulse width modulation controlling circuit is used for a power supply. However, Ng discloses it is well known in the art of power supply circuitry to use a pulse width modulator to generate a power supply output voltage. The PWM circuit allows the output voltage to be easily changed when necessary (column 5, lines 15-31). It would have been obvious for one of ordinary skill in the art at the time of the invention to use the power supply circuit of Lubomirsky to output a power supply voltage as shown by Ng for the reason stated above.

Claims 2, 18, 32 and 49 of the instant application correspond to claim 7 of Lubomirsky.

Claims 3, 19 and 33 of the instant application correspond to claim 8 of Lubomirsky.

Claims 4, 20 and 34 of the instant application correspond to claim 9 of Lubomirsky.

Claims 5 and 35 of the instant application correspond to claim 10 of Lubomirsky.

Claims 6 and 36 of the instant application correspond to claim 11 of Lubomirsky.

Claims 7, 21, 42 and 58, of the instant application correspond to claim 12 of Lubomirsky.

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Claims 8, 22, 37 44, 53 and 60 of the instant application correspond to claim 13 of Lubomirsky.

Claims 9, 23, 43 and 59 of the instant application correspond to claim 14 of Lubomirsky.

Claims 10, 24, 26, 37, 39, 51 and 55 of the instant application correspond to claim 15 of Lubomirsky.

Claims 11, 25, 27, 38, 40, 52, 54 and 56 of the instant application correspond to claim 16 of Lubomirsky.

Claims 12, 28, 45 and 61 of the instant application correspond to claim 5 of Lubomirsky.

Claims 13, 29, 46 and 62 of the instant application correspond to claim 3 of Lubomirsky.

Claims 14, 30, 47 and 63 of the instant application correspond to claim 17 of Lubomirsky.

Allowable Subject Matter

Claims 15 and 64-79 are allowed.

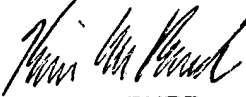
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin M. Burd whose telephone number is (571) 272-3008. The examiner can normally be reached on Monday - Friday 9 am - 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on (571) 272-2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Kevin M. Burd
7/5/2006


KEVIN BURD
PRIMARY EXAMINER